Student name:\_\_\_\_\_\_\_\_\_\_

**1)** If a scientist forms and tests a hypothesis, but gets unexpected results, what is a logical next step? Check all that apply.

A) Accept the original hypothesis   
 B) Reject the original hypothesis  
 C) Revise the original hypothesis  
 D) Design a new experiment based on a new or modified hypothesis.

**2)** Some researchers think pheromones are important tools in human communication. Pheromones are chemical signals that one individual sends to another. What research questions might be asked by anatomists, and what questions might be asked by physiologists, to determine if pheromones are important to humans?

**3)** Iron atoms help our blood transport oxygen. Describe each level of anatomical structural complexity for an iron atom in your blood, working from the simplest level (atom) to the most complex (organism).

**4)** If someone speaks too loudly into a microphone, a public address system will sometimes produce a loud whistle of amplified feedback. Explain whether this is an example of negative or positive feedback, and explain how the microphone, control box,and speaker of the system serve as the different components of a feedback loop.

**5)** The discipline known as \_\_\_\_\_\_\_\_\_\_\_\_\_ anatomy examines similarities and differences across species.

**6)** The discipline that studies the functions of the nervous system, including the way that impulses are conducted, is known as \_\_\_\_\_\_\_\_\_\_.

**7)** The discipline that associates changes in organ system function with disease or injury is known as \_\_\_\_\_\_\_\_\_\_\_\_.

**8)** The group of metabolic reactions in which smaller molecules are combined to form larger ones is \_\_\_\_\_\_\_\_\_\_\_.

**9)** Specialized subunits of cells that are made of macromolecules are called \_\_\_\_\_\_\_\_\_\_.

**10)** The organ system that transports andfilters interstitial fluid while also participating in immune responses is the \_\_\_\_\_\_\_\_\_\_ system.

**11)** The pituitary, thyroid, and adrenal glands are typically grouped within the \_\_\_\_\_\_\_\_\_\_ system.

**12)** The appendix is in the right iliac region, and is therefore located in the \_\_\_\_\_ \_\_\_\_\_\_ quadrant.

**13)** The level of organization one step more complex than the organ level is the\_\_\_\_\_\_ level.

**14)** The state of equilibrium, or fairly constant interval environment, in the body is called \_\_\_\_\_\_\_\_.

**15)** The \_\_\_\_\_\_ reproductive system produces oocytes.

**16)** The antecubital region is \_\_\_\_\_\_ to the brachial region.

**17)** The muscular partition that separates the thoracic and abdominopelvic cavities is the thoracic \_\_\_\_\_\_.

**18)** The hypogastric region is located \_\_\_\_\_\_ to the right iliac region.

**19)** Sensory nerves that detect changes in a variable that is being regulated comprise the \_\_\_\_\_\_\_\_ of the control mechanism.

**20)** In a homeostatic control mechanism, the receptor detects changes in the environment and relays that information to the \_\_\_\_\_\_\_\_\_\_\_\_.

**21)** The reinforcement of a stimulus so that a climax is reached is known as \_\_\_\_\_\_\_\_\_\_\_\_.

**22)** The word "anatomy" comes from

A) Latin and means "to be born."   
 B) Hebrew and means "shape."  
 C) Greek and means "to cut apart."  
 D) German and means "body."  
 E) Italian and means "form."

**23)** A scientist who describes the layers of the heart wall and their relationship to the surrounding pericardium would be a(n)

A) anatomist.   
 B) physiologist.  
 C) pathologist.  
 D) pulmonologist.

**24)** \_\_\_\_\_\_ anatomy examines both superficial anatomic markings and internal body structures as they relate to the skin covering them.

A) Regional   
 B) Surface  
 C) Radiographic  
 D) Surgical  
 E) Systemic

**25)** Which branch of microscopic anatomy is the study of tissues?

A) Histology   
 B) Cytology  
 C) Embryology  
 D) Developmental anatomy  
 E) Surgical anatomy

**26)** Gross anatomy refers to the study of

A) cells.   
 B) structures formedby cells.  
 C) structures notvisible to the unaided eye.  
 D) structures visibleto the unaided eye.  
 E) nasalsecretions.

**27)** The anatomic changes that result from disease are studied under

A) pathologicanatomy.   
 B) systemicanatomy.  
 C) histology.  
 D) surgicalanatomy.  
 E) developmentalanatomy.

**28)** The two main divisions of microscopic anatomy are

A) embryology andparasitology.   
 B) cytology andhistology.  
 C) comparativeanatomy and pathological anatomy.  
 D) neurobiology andsurface anatomy.

**29)** When medical students study all of the structures in a particular area of the body as a unit(for example,all the muscles, blood vessels, and nerves of the leg), that approach is called

A) surfaceanatomy.   
 B) comparativeanatomy.  
 C) poplitealphysiology.  
 D) regionalanatomy.  
 E) systemicanatomy.

**30)** The scientific discipline that studies the functions of body structures is

A) anatomy.   
 B) physiology.

**31)** Which is a physiological description rather than an anatomical one?

A) The muscles of theintestinal wall contract slowly and involuntarily.   
 B) The walls of bloodcapillaries are composed of a thin epithelium.  
 C) The muscles of thethigh are composed of skeletal muscle tissue.  
 D) There arefenestrations (openings) in the epithelial cells of capillary walls.  
 E) The esophageal wallincludes a middle layer of dense irregular connective tissue.

**32)** Respiratory physiology is primarilythe study of

A) cell shape withinthe alveoli of the lungs.   
 B) the branchingpattern of the small airways of the lungs.  
 C) the tissuecomposition of the airways, air sacs, and blood vessels.  
 D) how gases aretransferred between the lungs and the blood vessels supplying them.

**33)** The large surface area of the inside of the small intestine means that this structure is

A) well adapted forits physiological role in absorption.   
 B) derived from anembryological structure that served a different function.  
 C) anatomicallycomplex but physiologically simple.  
 D) maladaptive inthat it harbors bacteria.

**34)** The mechanism by whichthe body propels food through the digestive tract is primarily a topic of study for

A) anatomists.   
 B) physiologists.

**35)** The term that refers to the ability of organisms to react to changes in the environment is

A) responsiveness.   
 B) reproduction.  
 C) metabolism.  
 D) development.  
 E) organization.

**36)** The various chemical reactions that organisms carry out are collectively called

A) reproduction.   
 B) homeostasis.  
 C) metabolism.  
 D) responsiveness.  
 E) development.

**37)** The category of reactions in which larger molecules are broken down into smaller ones is known as

A) anabolism.   
 B) catabolism.  
 C) synthesis.  
 D) homeostasis.  
 E) enzymatic.

**38)** The smallest structural unit that exhibits the characteristics of living things is

A) an organ.   
 B) an individual.  
 C) tissue.  
 D) a cell.  
 E) a system.

**39)** Which level consists of related organs that work to achieve a common function?

A) Organ system level   
 B) Cellular level  
 C) Tissue level  
 D) Chemical level  
 E) Organ level

**40)** At what level of organization is a tooth, which contains multiple tissue types?

A) Tissue level   
 B) Cell level  
 C) Organ level  
 D) System level  
 E) Atomic level

**41)** Which of the following statements accurately describes the organization of structures?

A) Organs are made upof tissues, which are made up of cells, which are made up of organelles andmolecules.   
 B) Tissues are madeup of organs, which are made up of cells, which are made up of individualatoms.  
 C) Organisms are madeup of tissues, which are made up of organ systems, which are made up ofDNA.  
 D) Organ systems aremade up of cells, which are made up of tissues, which are made up oforganelles.  
 E) Organs are made up of cells, which aremade up of atoms, which are made up of molecules.

**42)** Which system is responsible for providing protection, regulating body temperature, and being the site of cutaneous receptors?

A) Respiratory   
 B) Muscular  
 C) Integumentary  
 D) Urinary  
 E) Nervous

**43)** The body system that provides support and protection as well as being a site of blood cell production (hemopoiesis) is the \_\_\_\_\_\_\_\_\_\_\_\_ system.

A) skeletal   
 B) muscular  
 C) cardiovascular  
 D) respiratory  
 E) lymphatic

**44)** The system responsible for the exchange of gases between the blood and atmospheric air is the \_\_\_\_\_\_\_\_\_\_\_\_\_ system.

A) urinary   
 B) respiratory  
 C) cardiovascular  
 D) endocrine  
 E) nervous

**45)** Which describes the anatomic position?

A) Body isupright.   
 B) Palms are facingforward.  
 C) Thumbs point awayfrom the body.  
 D) Feet are flat onthe floor.  
 E) All of the choices are correct.

**46)** The word \_\_\_\_\_ implies an imaginary flat surface passing through the body.

A) section   
 B) plane  
 C) direction  
 D) tangent  
 E) figure

**47)** A plane that passes through the structure at an angle is called

A) frontal.   
 B) coronal.  
 C) oblique.  
 D) sagittal.  
 E) transverse.

**48)** A(n) \_\_\_\_\_\_\_ plane separates the body into superior and inferior parts.

A) transverse   
 B) oblique  
 C) sagittal  
 D) coronal  
 E) frontal

**49)** Which best defines "superficial"?

A) On the inside   
 B) On the outside  
 C) Toward the end of an appendage  
 D) Close to the attachment of the appendage to the trunk  
 E) At the head end

**50)** The directional term that means "away from the midline of the body" is

A) inferior.   
 B) superior.  
 C) medial.  
 D) lateral.  
 E) caudal.

**51)** The directional term that means "closest to the point of attachment to the trunk" is

A) distal.   
 B) proximal.  
 C) medial.  
 D) cephalic.  
 E) dorsal.

**52)** The directional term that means "in back of" or "toward the back surface" is

A) posterior.   
 B) caudal.  
 C) cephalic.  
 D) anterior.  
 E) proximal.

**53)** The best term for referring to the rear or "tail end" is

A) caudal.   
 B) cephalic.  
 C) inferior.  
 D) superior.  
 E) lateral.

**54)** The head, neck, and trunk make up the \_\_\_\_\_\_ region of the body.

A) appendicular   
 B) axial  
 C) cephalic  
 D) caudal  
 E) thoracic

**55)** The cranial cavity houses the

A) eyeball.   
 B) ear canals.  
 C) brain.  
 D) spinal cord.  
 E) nasalstructures.

**56)** The bones of the vertebral column form a cavity called the

A) nervous systempassageway.   
 B) abdominalcavity.  
 C) pleural cavity.  
 D) vertebralcanal.

**57)** The axillary region is \_\_\_\_\_\_ to the pectoral region.

A) lateral   
 B) medial  
 C) distal  
 D) proximal  
 E) inferior

**58)** The anatomic term for the cheek is

A) buccal.   
 B) pelvic.  
 C) cervical.  
 D) crural.  
 E) sacral.

**59)** The popliteal region is best seen from a(n) \_\_\_\_\_\_\_\_ view.

A) anterior   
 B) lateral  
 C) superior  
 D) inferior  
 E) posterior

**60)** What is the anatomic term for the foot?

A) Pubic   
 B) Patellar  
 C) Ped  
 D) Popliteal  
 E) Acromial

**61)** Which anatomical term describes the wrist region?

A) Tarsal   
 B) Carpal  
 C) Digital  
 D) Olecranal  
 E) Perineal

**62)** With the subject in the anatomic position, onecan best see the dorsum of the manus from a(n) \_\_\_\_\_\_ view.

A) lateral   
 B) superior  
 C) inferior  
 D) posterior  
 E) anterior

**63)** The primary function of serous fluid is

A) to serve as alubricant.   
 B) to provideastabilizing force.  
 C) to insulate.  
 D) to storeenergy.  
 E) to provide anattachment surface.

**64)** The anatomic term for the calf is

A) crural.   
 B) popliteal.  
 C) tarsal.  
 D) carpal.  
 E) sural.

**65)** The term "hallux" refers to the

A) little finger.   
 B) thumb.  
 C) great toe.  
 D) lateral-mosttoe.  
 E) middle digit.

**66)** What is the anatomic term for the hip region?

A) Sternal   
 B) Coxal  
 C) Dorsal  
 D) Crural  
 E) Sural

**67)** A professional fighter hit in the mental region might have damage to the

A) jaw.   
 B) ear.  
 C) nose.  
 D) knee.  
 E) shoulder.

**68)** "Pollex" refers to the

A) eyebrow.   
 B) thumb.  
 C) great toe.  
 D) little finger.  
 E) kneecap.

**69)** An inguinal hernia is in the region of the

A) umbilicus.   
 B) groin.  
 C) calf.  
 D) thigh.  
 E) shoulder.

**70)** Which serous membrane covers the surface of an organ?

A) The parietal layer   
 B) The visceral layer  
 C) The muscle layer  
 D) The dorsal layer  
 E) The ventral layer

**71)** The pleural cavity is the

A) same as themediastinum.   
 B) the serous membranelining the abdomen.  
 C) space within whichthe heart sits.  
 D) potential spacebetween the twoserous membranes surrounding a lung.

**72)** The limbs of the body are attached to the axis and make up the

A) abdominalregion.   
 B) thoracicregion.  
 C) axial region.  
 D) appendicularregion.  
 E) antebrachialregion.

**73)** The median space in the thoracic cavity is called the

A) pleuralcavity.   
 B) pericardialcavity.  
 C) mediastinum.  
 D) peritonealcavity.  
 E) hypochondriacspace.

**74)** The pericardium is a two-layered serous membrane that

A) encloses theheart.   
 B) encloses thekidney.  
 C) encloses alung.  
 D) provideslubrication for the knee.  
 E) covers the smallintestine.

**75)** The serous fluid that helps in cardiac function is located

A) inside the heart'schambers.   
 B) between theparietal pericardium and the sternum.  
 C) in the pericardialcavity, between the parietal and visceral pericardial layers.  
 D) between thevisceral pericardium and the cardiac muscle.

**76)** With a specimen in the anatomic position, you can best see the mediastinum with a \_\_\_\_\_ view.

A) midsagittal   
 B) superior  
 C) inferior  
 D) frontal  
 E) posterior

**77)** The moist, two-layered serous membrane that lines the abdominopelvic cavity is called the

A) peritoneum.   
 B) thoracic diaphragm.  
 C) synovium.  
 D) pleura.  
 E) pericardium.

**78)** Of the nineabdominopelvic regions, the one that is most superior in themiddle column is called the

A) lumbar.   
 B) umbilical.  
 C) epigastric.  
 D) hypogastric.  
 E) hypochondriac.

**79)** Which abdominopelvic regions have both a right and a left side?

A) Only the lumbar andiliac   
 B) Only thehypogastric and hypochondriac  
 C) The hypochondriac,lumbar, and hypogastric  
 D) Only the iliac andhypochondriac  
 E) The lumbar, iliac,and hypochondriac

**80)** Lateral to the umbilical abdominopelvic region are the \_\_\_\_\_ regions.

A) hypochondriac   
 B) iliac  
 C) hypogastric  
 D) epigastric  
 E) lumbar

**81)** The urinary bladder is found in which abdominopelvic region?

A) Hypogastric   
 B) Right lumbar  
 C) Hypochondriac  
 D) Left iliac  
 E) Left lumbar

**82)** The abdominopelvic quadrants are formed by passing one horizontal and one vertical line through the

A) patellarregion.   
 B) umbilicus.  
 C) antebrachialregion.  
 D) glutealregion.  
 E) crural region.

**83)** The control center of a homeostatic mechanism

A) bringsaboutchange to the internal environment.   
 B) integrates sensoryinput and signals for change as needed.  
 C) is a change in theexternal environment.  
 D) detects a changein a variable that is being regulated.

**84)** The part of the homeostatic control mechanismthat brings about change is the

A) controlcenter.   
 B) stimulus.  
 C) effector.  
 D) receptor.

**85)** When you are exposed to bright light, a reflex is initiated and the muscles of your iris contract to decrease your pupil size. The iris muscles areacting as a(n)

A) effector.   
 B) controlcenter.  
 C) receptor.  
 D) postitivefeedback.

**86)** When you are exposed to bright light, cells in the retina detect the stimulus and send it to the brain for processing. The brain commands the iris to constrict and decrease pupil size. Which structure serves as a receptor in this system?

A) The retina   
 B) The iris  
 C) The eyelid  
 D) The brain's visualcortex

**87)** Which of the following choices places the components of a homeostatic control system in proper order?

A) Effector, controlcenter, stimulus, receptor   
 B) Stimulus, receptor,control center, effector  
 C) Receptor, effector,control center, stimulus  
 D) Stimulus, controlcenter, effector, receptor  
 E) Receptor, controlcenter, stimulus, effector

**88)** The normal level at which a physiological variable is maintained is known as its

A) stimulus.   
 B) controlcenter.  
 C) negativefeedback.  
 D) set point.  
 E) effector.

**89)** If carbon dioxide levels rise in the body, negative feedbackmechanisms will trigger

A) an increase inbreathing so that carbon dioxide levels decline to the set point.   
 B) an increase inbreathing so that carbon dioxide levels rise further above set point.  
 C) a decrease inbreathing so that carbon dioxide levels rise to the set point.  
 D) a decrease inbreathing so that carbon dioxide levels decline below set point.

**90)** In the positive feedback mechanism governing breastfeeding, the mammary glands of the breast serve as the

A) controlcenter.   
 B) receptor.  
 C) effector.  
 D) set point.

**91)** Disease is often considered the result of

A) negativefeedback.   
 B) failure ofhomeostatic systems.  
 C) maintenance of setpoint.  
 D) feedback loops.

**92)** Diagnosing a disease involves determining the

A) cause of thehomeostatic imbalance.   
 B) multiple sideeffects of a drug.  
 C) effector and theset point.  
 D) negativity of thefeedback.

**93)** Which of the following is an example of a best practice for effectively studying anatomy and physiology material?

A) Explaining a concept to a study partner   
 B) Study by exclusively reading and re-reading the material  
 C) Wait until a day or two before the test before studying  
 D) Study in fewer, longer sessions as compared to numerous, shorter sessions

**94)** Which of the following describes the sequence of steps in the scientific method?

A) Observe a natural event, form a hypothesis, experiments and testing, form conclusions   
 B) Form a hypothesis, form conclusions, experiments and testing, observe a natural event  
 C) Experiments and testing, form a hypothesis, observe a natural event, form conclusions  
 D) Form conclusions, observe a natural event, form a hypothesis, experiments and testing

**95)** Describe the positions of the thumbs and the palms of the hands in the anatomic position.

**96)** Explain the spatial relationship between the following: thoracic cavity, pericardial cavity, ventral cavity, mediastinum.

**97)** Define the term "negative feedback."

**98)** Anatomy is the study of structure and form.

⊚ true  
 ⊚ false

**99)** Because the body has been the same for thousands of years, anatomy is considered a static classification system instead of adynamic science.

⊚ true  
 ⊚ false

**100)** Cytology is a subdivision of gross anatomy.

⊚ true  
 ⊚ false

**101)** Physiologists use chemistry to understand the workings of the body's organ systems.

⊚ true  
 ⊚ false

**102)** Both anatomists and physiologists are awarethat form and function are interrelated.

⊚ true  
 ⊚ false

**103)** Homeostasis refers to an organism's ability to regulate its internal environment despite changes in the external environment.

⊚ true  
 ⊚ false

**104)** A molecule is made up of a combination of two or more atoms.

⊚ true  
 ⊚ false

**105)** In the anatomic position, the specimen rests horizontally on the examination tableand the arms are extended away from the torso.

⊚ true  
 ⊚ false

**106)** The mediastinum is within the ventral cavity.

⊚ true  
 ⊚ false

**107)** The fact that the structures of cells vary widely reflects the specializations needed for their different functions.

⊚ true  
 ⊚ false

**108)** Organs contain two or more tissues that work together to perform specific, complex functions.

⊚ true  
 ⊚ false

**109)** The cell is the smallest living portion of the human body.

⊚ true  
 ⊚ false

**110)** Fortunately for science, there is but one single property that defines life.

⊚ true  
 ⊚ false

**111)** The life characteristic of reproduction may be interpreted at both the cellular and organismal levels.

⊚ true  
 ⊚ false

**112)** The urinary system filters the blood, concentrates waste products, and removes waste products from the body.

⊚ true  
 ⊚ false

**113)** The anatomic position allows all observers to have a common point of reference.

⊚ true  
 ⊚ false

**114)** A coronal plane is a vertical plane that divides the body into anterior and posterior parts.

⊚ true  
 ⊚ false

**115)** The chest is superior to the head.

⊚ true  
 ⊚ false

**116)** The antecubital region is proximal to the carpal region.

⊚ true  
 ⊚ false

**117)** The mediastinum is a serous cavity.

⊚ true  
 ⊚ false

**118)** The right and left iliac regions are found lateral to the hypogastric region.

⊚ true  
 ⊚ false

**119)** The lumbar regions are located lateral to the umbilical region.

⊚ true  
 ⊚ false

**120)** The central nervous system acts as the control center for the regulation of blood calcium and blood glucose.

⊚ true  
 ⊚ false

**121)** If your body temperature starts to decline, your body responds by exciting skeletal muscles so that you shiver and your temperature returns to normal. This is an example of negative feedback.

⊚ true  
 ⊚ false

**122)** The term "positive feedback" means that the outcome of the system is a good one.

⊚ true  
 ⊚ false

**123)** Damage to the heart can cause inadequate blood circulation, which can lead to more damage to the heart. This is an example of a positive feedback cycle.

⊚ true  
 ⊚ false

**124)** For better retention of material, it is better to break up study sessions into multiple smaller chunks (e.g. 30 minutes each) rather than fewer, longer sessions (e.g. several hours each).

⊚ true  
 ⊚ false

**Answer Key**Test name: chapter 1

1) [B, C, D]

5) comparative

6) neurophysiology

7) pathophysiology

8) anabolism

9) organelles

10) lymphatic

11) endocrine

12) right lower

13) organ system

14) homeostasis

15) female

16) distal

17) diaphragm

18) medial

19) receptor

20) control center

21) positive feedback

22) C

23) A

24) B

25) A

26) D

27) A

28) B

29) D

30) B

31) A

32) D

33) A

34) B

35) A

36) C

37) B

38) D

39) A

40) C

41) A

42) C

43) A

44) B

45) E

46) B

47) C

48) A

49) B

50) D

51) B

52) A

53) A

54) B

55) C

56) D

57) A

58) A

59) E

60) C

61) B

62) D

63) A

64) E

65) C

66) B

67) A

68) B

69) B

70) B

71) D

72) D

73) C

74) A

75) C

76) D

77) A

78) C

79) E

80) E

81) A

82) B

83) B

84) C

85) A

86) A

87) B

88) D

89) A

90) C

91) B

92) A

93) A

94) A

98) TRUE

99) FALSE

100) FALSE

101) TRUE

102) TRUE

103) TRUE

104) TRUE

105) FALSE

106) TRUE

107) TRUE

108) TRUE

109) TRUE

110) FALSE

111) TRUE

112) TRUE

113) TRUE

114) TRUE

115) FALSE

116) TRUE

117) FALSE

118) TRUE

119) TRUE

120) FALSE

121) TRUE

122) FALSE

123) TRUE

124) TRUE